TOWN OF ATHOL

2010 Yearly Operational Plan

Submitted by:
Town of Athol Department of Public Works

Prepared by:
Vegetation Control Service, Inc.

June 1, 2010

SUMMARY

A yearly operational plan (YOP) must be submitted to the Department of Agricultural Resources (DAR) every year herbicides are intended for use to maintain public ways (rights-of-way). The YOP provides a detailed program for vegetation management including the methods used to identify target vegetation and sensitive areas, planned treatment methods, herbicides and herbicides mixtures and rates for the year.

A five year Vegetation Management Plan (VMP) is available for review at www.athol-ma.gov/ the office of the Department of Public Works, Board of Health, Conservation Commission and Board of Selectmen.

Upon receipt of this YOP, the DAR publishes a notice in the Environmental Monitor. The Town must also provide a copy of the proposed YOP and Environmental Monitor notice to the Board of Health, Conservation Commission, and Chief Elected Official. The Department allows a 45-day comment period on the proposed YOP beginning with the publication of the notice and receipt of the YOP and Environmental Monitor notice. A one page notice is also sent to all public water suppliers.

Public notification of herbicide application is made at least 21 days prior to the treatment(s) by a separate notice. This Notice is made to the Department of Agricultural Resources, Chief Elected Official, Board of Health, the Conservation Commission and the Municipal Public Water Supplier.

A Newspaper Notice will also be made at least 48 hours in advance of the treatment(s).

Any comments on this YOP should be made to the person designated herein as the person supervising the YOP or the person performing the treatment.

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1. INTRODUCTION

In compliance with Commonwealth of Massachusetts' Rights-of-Way Vegetation Management Regulations (333 CMR 11.00) the Town of Athol's Yearly Operational Plan (YOP) details our vegetation management program for 2010. This YOP is consistent with the terms and procedures set forth in Athol's 2010-2013 five-year Vegetation Management Plan (VMP); with the Massachusetts Pesticide Control Act (Chapter 132B); with all pertinent clauses in Chapter 85 of the Acts of 2000; and with all acts and regulations that apply to public-way (right-of-way) vegetation management.

Vegetation growing along curbings, within and around paved traffic islands, in cracks in the asphalt, under guiderails along roadways and in areas that cannot be mowed is of a growing concern in Athol. These areas, along with Poison Ivy, Japanese Knotweed and other public nuisance vegetation, can be effectively controlled with the use of herbicide applications.

Herbicide applications will be done under the supervision of a certified applicator in compliance with 333 CMR 11.00 as detailed in the public way Integrated Vegetation Management (IVM) program and protocols described in Athol's VMP.

In order of preference, an Integrated Vegetation Management program on public ways is a combination of cultural, physical, mechanical, and chemical management techniques that control undesirable vegetation in an ecologically sound manner. As with all IVM programs, this program is designed to maximize control of undesirable vegetation while minimizing any potential impact to the environment.

2. THE INDIVIDUALS THAT WILL PERFORM AND SUPERVISE THE HERBICIDE TREATMENT

The Town of Athol DPW will supervise the herbicide applications with the assistance of Vegetation Control Service, Inc. Town of Athol DPW and/or VCS, inc. licensed applicators will perform the herbicide applications under the direct on-site supervision of a VCS, inc. Certified Applicator.

Supervisor: **Douglas Walsh**
Superintendant
Department of Public Works
584 Main Street
Athol, MA 01331
(978) 249-4542

Certified Applicators: **Vegetation Control Service, Inc.**
2342 Main Street
Athol, MA 01331
(978) 249-5348
Contacts: Robert Shepardson, Harry Williston, Wendy L. Priestley

3. LOCATION OF INTENDED HERBICIDE TREATMENT(S)

For 2010, the primary treatment areas include, but are not limited to, cracks in asphalt, along guiderails, along curbings, within and around paved traffic islands, between sidewalks and the adjacent curbing, and wherever public nuisance vegetation, particularly Poison Ivy and Japanese Knotweed is causing a public hazard.

Planned treatment areas and known *Sensitive Areas* are included in the map of Athol included in Appendix A.

An Athol street listing is also included in Appendix A to cover potential treatment locations for public nuisance and vegetation posing a risk to public safety. Especially for Poison Ivy and Japanese Knotweed, predicting the location of all target vegetation along public ways in advance of the active growing season is not possible or practical. In an effort to limit the application of herbicides only to areas that require treatment, the town will, therefore, conduct patrols and treat only those areas in which vegetation poses a public nuisance and/or poses a safety risk to pedestrian or vehicular safety and which cannot be practically treated by the other methods listed in the VMP.

4. IDENTIFICATION OF TARGET VEGETATION

Target Vegetation:
Vegetation that poses a public nuisance and/or poses a safety risk to pedestrian or vehicular safety.

Nuisance Grass and Herbaceous Growth

In most instances grass is a desirable plant species. Along the shoulders of roads, grass growth is encouraged and maintained through mechanical mowing. However, in some instances, grasses and other herbaceous plants can be identified as targets in areas where they cause a safety risk. These areas include, but are not limited to along curbings, cracks in asphalt, along guiderails, within and around paved traffic islands, and between sidewalks and the adjacent curbing.

Public Nuisance Vegetation

Public nuisance vegetation includes, but is not limited to poisonous and noxious plant species growing along public ways that pose a health hazard. Noxious vegetation poses a risk to safety and health because of heavy thorns, dense foliage and/or impenetrable stems; examples include but are not limited to Multiflora Rose, Common and Glossy Buckthorn, and Blackberries. Although not the only target species of concern, Poison Ivy is the dominant poisonous plant community along public ways that requires control.

Vegetation Posing a Risk to Safety

Vegetation that hampers visibility or impedes movement along public ways often poses a risk to public safety. M.G.L. Chapter 87, Section 5 authorizes tree wardens to have control of "all public shade trees, shrubs, and growths" along public ways. This includes woody plant species and invasive species. A short list of examples includes all tree species considered "street trees", all shrubs, vines and more specifically, invasive species, particularly Autumn Olive, Japanese Knotweed, Bittersweet and Multiflora Rose. Please note that only vegetation under 12 feet tall may be foliar treated.

5. DEFINITION, IDENTIFICATION AND TREATMENT OF SENSITIVE AREAS

The general definition of *Sensitive Areas* regulated by 333 CMR 11.04 is as follows:

> …any areas within Rights-of-Way, including No-Spray and Limited-Spray Areas, in which public health, environmental or agricultural concerns warrant special protection to further minimize risks of unreasonable adverse effects.

Protecting these environmentally sensitive sites is accomplished by defining specific *Sensitive Areas* and establishing buffer zones and treatment restrictions within their borders according to Table 1 below. These *Sensitive Areas* consist of no-spray zones in which herbicide

use is prohibited, larger, limited spray areas where herbicide use is permitted under certain conditions.

Treatment in limited spray areas require the use of herbicides from the *Sensitive Area Materials List* available at: www.mass.gov/agr/pesticides/rightofway/index.htm, following the application restrictions in 333 CMR 11.04 which includes applying minimum labeled herbicide application rate for the control of target species.

TABLE 1: CONTROL STRATEGIES FOR SENSITIVE AREAS

Table Compiled by Jeffrey M. Taylor, Vegetation Control Service, Inc.

Sensitive Area	Limited Spray or No-Spray Areas (feet)	Control Method	Time Limits Between Treatment(s)
Public Ground Water Supplies	400'	Mechanical Only	None
Primary Recharge Area	Designated buffer zone or 1/2 mile radius	Mechanical, Approved Herbicides*	24 months
Public Surface Water Supplies (Class A & Class B)	100'	Mechanical Only	None
	100'-400'	Approved Herbicides	24 months
Tributary to Class A Water Source, within 400' upstream of water source	100'	Mechanical Only	None
	100'-400'	Approved Herbicides	24 months
Tributary to Class A Water Source, greater than 400' upstream of water source	10'	Mechanical Only	None
	10'-200'	Approved Herbicides	24 months
Class B Drinking Water Intake, within 400' upstream of intake	100'	Mechanical Only	None
	100'-200'	Approved Herbicides	24 months
Private Drinking Water Supplies	50'	Mechanical Only	None
	50'-100'	Approved Herbicides	24 months
Surface Waters	10'	Mechanical Only	None
	10'-100'	Approved Herbicides	12 months
Rivers	10' from mean annual high water line	Mechanical Only	None
	10'-200'	Approved Herbicides	12 months
Wetlands	10’	Mechanical Only	None
	100’ or with approved Wetlands Determination 10’-100’ [per 310 CMR 0.05(3)(a) & 310 CMR 0.03(6)(b)]	Low-pressure Foliar, CST, Basal, Approved Herbicides	24 months
Inhabited Areas	100'	Approved Herbicides	12 months
Agricultural Area (Crops, Fruits, Pastures)	100'	Approved Herbicides	12 months
Certified Vernal Pools	10'	Mechanical Only when water is present	None
Certified Vernal Pool Habitat	10'-outer boundary of habitat	No treatment without approval	
Priority Habitat	No treatment outside the 4 foot paved road exemption without approval of the Natural Heritage Endangered Species Program (NHESP)		

*Massachusetts Approved herbicides for sensitive sites

Identification Methods

As appropriate, *Sensitive Areas* will be identified and marked in the field by trained and experienced individuals.

Two simple descriptions guide the complex identification of the *Sensitive Areas* defined in 333 CMR 11.04: *Readily identifiable in the field* and *Not readily identifiable in the field.* Readily identifiable in the field areas will be treated, identified and when appropriate, marked according to all applicable restrictions listed in 333 CMR 11.00. Not readily identifiable in the field areas will likewise marked and treated when appropriate, but they are identified by the use of data marked on maps and collected in the YOP and notification processes before the time of treatment.

The individuals assigned the task of identifying and treating *Sensitive Areas* in the field will use the appropriate sources and methods from the following list:

- Town maps, records and institutional knowledge
- Massachusetts Department of Environmental Protection water supply maps and/or GIS (Geographic Information Systems) mapping layers available through MassGIS (http://www.mass.gov/mgis/)
- Water Department, DAR and Athol Board of Health maps and lists of identified private wells along the ROW
- Correspondence, meetings and input—from the chief elected official, board of health, conservation commission, public water suppliers and the public—within the forty-five day YOP and twenty-one day municipal right-of-way notification letter review and comment periods and the 48 hour newspaper notification (under 333 CMR 11.06 & 11.07 and Chapter 85 of the Acts of 2000)
- An advance point person who verifies, identifies and where appropriate marks *Sensitive Areas* and any additional areas that may require special precautions
- USGS topographical maps
- Information from MassGIS
- When necessary, confidential information from NHESP
- A copy of the YOP and VMP.

6. PROPOSED HERBICIDE TREATMENT METHODS

Athol's VMP describes a number of proposed treatment methods, but for 2010 the herbicide program will consist of the following:

Chemical (Herbicide Applications) Methods

1. **Foliar Treatments:** the selective application of herbicides diluted in water, to the foliage of target vegetation. Two types of equipment for foliar treatments are used: back pack and vehicle mounted. Both treatments use low pressure, below 60 pounds per square

inch (psi) at the nozzle, for applications. Foliar applications take place when leaves are fully developed in the spring until early fall and the beginning of leaf abscission—i.e., when leaves begin dropping off the vegetation.

a. **Back pack sprayers** include hand pump or motorized back pack sprayer or squirt bottles. This technique is excellent for spot treatments, such as localized Poison Ivy infestations. It is not as effective as other vegetation management methods on tall, high density target vegetation.

b. **Vehicle mounted sprayers** use truck or tractor mounted equipment that delivers the herbicide solution through nozzles attached to a hose or boom-mounted apparatus. The herbicide solution uses a water based herbicide mixture from a tank and pump on the application vehicle. This technique is used along roadways that have good access and where obstructions, terrain or site sensitivity do not exclude the equipment.

2. **Pre-emergent Treatments:** the use of pre-emergent herbicides using the same equipment described in the foliar treatments above. Pre-emergent applications are used where season long vegetation control requires "vegetation-free conditions" such as along curbing, sidewalks, under guiderails/guardrails and on paved traffic islands. Usually, pre-emergent treatments are used in conjunction with foliar applications, unless the goal is to prevent the growth of vegetation in the spring, to reduce the amount of applied herbicides and applications. This method is used from the early spring to early fall.

3. **Cut Stump Treatment (CST):** the mechanical cutting of target species followed by an herbicide treatment to the phloem and cambium tissue of the stumps. CST treatments prevent re-sprouts, thereby reducing the need to re-treat the same vegetation. The CST mixture is diluted in water or a non-freezing agent and is ideally made to freshly cut stumps. Application equipment includes low-volume, backpack, hand-pump sprayers, hand held squirt bottles, paintbrushes, or sponge applicators. This method is used where maximum control is desirable, to reduce the visual impact of vegetation management treatments and/or to reduce the potential of adverse impacts to desirable vegetation because of its selectivity. CST may be used at any time of the year provided snow depths do not prevent cutting the stumps below three inches in height. It is best to avoid during the season of high sap flow, or in moderate to heavy rains. It is not practical in moderate to heavy stem densities.

Final Note: Anti-drift Adjuvants are added to the mix or solution in foliage, pre-emergent and when appropriate, PGR applications because they help reduce the potential exposure to non-target organisms, reduce the break-up of sprays into fine droplets and increase selectivity and herbicide deposition onto target plants.

7. PROPOSED HERBICIDES, CARRIERS, ADJUVANTS AND RATES

Only Commonwealth of Massachusetts recommended herbicides listed below for use in *Sensitive Areas*—pursuant to 333 CMR 11.04 (1)(d) will be used throughout the town. Complete information on these products is included in Appendix C, Fact Sheets and Appendix D, Labels.

Table 2: Tank Mix #1 for Curbings, Cracks, Guiderail, Traffic Island Treatments (General Weed Control)

Herbicides & **Adjuvants**	Active Ingredient	Mix Concentration (per 100 gals. water)
Roundup Pro or Accord Concentrate	Glyphosate	2-5%
Oust Extra	Sulfometuron Methyl and Metsulfuron-Methyl	10 oz.
Surfactant: Induce or equivalent	n.a.	64 oz.
Loveland's 38F or other drift retardant	n.a.	4-16 oz.

Table 3: Tank Mix #2 for Poison Ivy, Noxious and Invasive Species

Herbicides & Adjuvants	Active Ingredient	Mix Concentration (per 100 gals. water)
Roundup Pro or Accord Concentrate	Glyphosate	2-5%
Escort XP	Metsulfuron-Methyl	1.25 oz.
Surfactant: Induce or equivalent	n.a.	64 oz.
Loveland's 38F or other drift retardant	n.a.	4-16 oz.

Table 4: Tank Mix #3 for Poison Ivy

Herbicides & Adjuvants	Active Ingredient	Mix Concentration (per 100 gals. water)
Garlon 4	Triclopyr	2-4%
Garlon 4 Ultra*	Triclopyr	2-4%
Induce (surfactant)	n.a.	64 oz.
Loveland's 38F or other drift retardant	n.a.	4-16 oz.

*When/If included on the *Sensitive Area Materials List.*

8. HANDLING, MIXING AND LOADING HERBICIDE CONCENTRATES

All herbicides will be handled, mixed and applied strictly by *Label Instructions* and in compliance with all applicable federal and state laws and regulations. All herbicide mixing should be done at the DPW garage and extreme care shall be exercised during all mixing, handling and loading in order to prevent careless spills or splashes. No herbicide concentrates will be mixed, handled or loaded on a ROW within one hundred (100) feet of a *Sensitive Area*.

Although it is expected that all the mixed herbicide will be used, any remaining will be stored in accordance with manufacturer's instructions.

9. ALTERNATE CONTROL TECHNIQUES

Vegetation management in Athol is a primarily mechanical treatment techniques program, as described in the VMP. Decisions on the appropriate control techniques are made following the IVM Protocol and Summary of Control Table in the VMP. The alternate control agreement processes is likewise described in the VMP.

For convenience sake, the IVM Protocol which is based on following a public way integrated vegetation management program is repeated below:

Monitoring*:* All public ways will be surveyed prior to any scheduled treatment program. Monitoring will be conducted by foot or by vehicle. Monitoring of areas may also result from public requests.

Maintenance: Roads will be cleaned using a street sweeper. Cracking asphalt and sidewalks and other right-of-way defects will be repaired. Where appropriate, the use of ground cover will be encouraged to assist in the prevention of undesirable target vegetation growth.

Direct Control Methods: The decision to use one or a combination of IVM techniques will take into consideration the cultural uses of the landscape. The direct IVM management tactics selected will control nuisance vegetation in the most environmentally responsible and efficient manner:

A. Physical Controls

1. Sealing cracks
2. General right-of-way repairs
3. Use of ground cover where appropriate
4. Cleaning ditches
5. Street sweeping

B. Mechanical Controls

1. Hand Cutting
2. Mowing
3. Selective Pruning

C. Chemical Controls

1. Foliar Treatments
2. Pre-emergent Treatments
3. Cut stump treatments
4. Basal treatments
5. Plant Growth regulators/Broadleaf Control.

Record Keeping: A log of surveyed areas will be kept for future planning and reference purposes. Areas maintained either through physical repair, mechanical or chemical control will be recorded by the DPW for at least 3 years.

10. TREATMENT RECORDS

The certified applicator must complete daily vegetation management reports that include:

A. Date, name and address of certified applicator(s)
B. Identification of site or work area
C. List of crew members
D. Type of equipment and hours used
E. Method of application and description of target vegetation
F. Amount, concentration, product name of herbicide(s), adjuvants, and dilutants (EPA registration numbers must be on file)
G. Weather conditions
H. Notation of any unusual conditions or incidents, including public inquiries
I. Recording and/or verification of sensitive areas on ROW maps

11. REMEDIAL PLAN TO ADDRESS SPILLS AND RELATED ACCIDENTS

This section is offered as a general procedural guide for responding to chemical spills or related accidents (related accidents include but are not limited to fire, poisoning and vehicle accidents). The following is, therefore, a guide to the items that will be available to the applicator on site in the event of a chemical spill or emergency.

Although education and attention will constantly be directed at accident and spill prevention, in the event of a spill, immediate action will be taken to contain the spill and protect the spill area (Appendix 4: *Herbicide Spill Check List* shall be available on-site to the applicator). Until completely clean, the spill area will be protected by placing barriers, flagging or crew

members at strategic locations, as appropriate. If a fire is involved, care will be taken to avoid breathing fumes from any burning chemicals.

Minor spills will be remedied by soaking up the spill with adsorption clay or other adsorptive material and placed in leak proof containers, removed from the site and disposed of properly. Dry herbicides, such as granulars, will be swept up or shoveled up directly into leak proof containers for proper disposal. When applicable, all contaminated soil will be placed in leak proof containers, removed from the site and disposed of properly. When applicable, activated charcoal will be incorporated into the soil at the spill location at a rate of several pounds per thousand square feet to inactivate any herbicide residue. Any spill will be reported to the DAR Pesticide Division.

The Massachusetts Department of Environmental Protection will be contacted when there is a spill of a reportable quantity, regardless of major or minor spill status and in accordance with 310 CMR 40.0000, Massachusetts Contingency Plan.

Types of Chemical Spills that Require Action

Chemicals include, but are not limited to the following:

- Herbicides
- Bar and Chain Oil
- Motor and Hydraulic Oil/Fluids
- Diesel Fuel
- Gasoline
- Title 3 Hazmat Materials

Required Spill Response Equipment

As a minimum, the treatment crew will have available on the job site:

- YOP with Emergency Contact List
- MSDS (Material Safety Data Sheet)
- Product Label
- Product Fact Sheets (when applicable)
- Appropriate adsorbent material
- Shovel
- Broom
- Flagging
- Leak Proof Container
- Heavy-duty Plastic Bags

Personal Contact

In the event of **Personal Contact** with hazardous chemicals:

- Wash affected area with plenty of soap and water
- Change clothing which has absorbed hazardous chemicals
- If necessary, contact a physician
- If necessary, contact the proper emergency services
- If necessary, follow the procedures for Major or Minor Spills as outlined in Appendix 5
- Avoid breathing the fumes of hazardous chemicals

Reference Tables (information subject to change as necessary)

Table 5: Herbicide Manufacturers

MANUFACTURER	TELEPHONE NUMBER	SPECIAL INSTRUCTIONS
BASF Corporation	(800) 832-4357	
Dow Agro Sciences	(800) 992-5994	
E.I. du Pont de Nemours and Co.	(800) 441-3637	Medical Emergencies
Monsanto	(314) 694-4000	
NuFarm	(877) 325-1840	Medical Emergencies

Table 6: State Agencies

STATE AGENCY	TELEPHONE NUMBER	SPECIAL INSTRUCTIONS
DAR Pesticide Bureau	(617) 626-1700	A.S.A.P. (within 48 hours)
Massachusetts Department of Environmental Protection, Emergency Response Section	Main Office: (888) 304-1133 Central Region: (508) 792-7650	For emergencies involving reportable quantities of hazardous materials, call within 2 hours. Required info: City/town, Street address, Site name (if applicable), material, quantity released, environment impacted
Massachusetts Poison Information Centers	800-682-9211	for medical emergencies involving suspected or known pesticide poisoning symptoms

Table 7: Emergency Services:

EMERGENCY SERVICE	TELEPHONE NUMBER	SPECIAL INSTRUCTIONS
Massachusetts State Police, Athol Barracks	(978) 249-2694	Framingham, after hours number
ChemTrec	(800) 424-9300	
Clean Harbors	(800) OIL-TANK	
Pesticide Hotline	(800) 858-7378	PST: 6:30 am-4:30 pm, web: www.NPIC.orst.edu

Table 8: Town of Athol contact(s) in the case of a spill or accident:

Athol Fire/ Police Department	911
Athol Health Agent	617-584-9714 (cell) 978-366-1553 (pager
Athol Public Works	978-249-4542